

AI Usage Statement

Use of AI in Writing and Editing

In the writing and completion of my papers, I have carefully considered the role of AI tools in assisting with efficiency while ensuring that the integrity of my writing remains uncompromised. Previously, my approach involved drafting paragraphs in Google Docs and subsequently using ChatGPT to refine the language, correct grammatical errors, and enhance professionalism. However, my advisor pointed out that some of my sentences appeared vague and lacked depth, which may have resulted from how I utilized AI tools. The AI's limited contextual understanding of my subject matter often led to overly generalized or incoherent revisions, diminishing the precision and clarity of my intended message. Recognizing this limitation, I have refined my workflow to maintain greater control over my writing, ensuring that AI serves only as a supplementary tool rather than a primary editor.

For these papers - review and research, I did not use ChatGPT for drafting or editing any part of the main content. Instead, I utilized Writefull, an AI-powered grammar assistant available on Overleaf, which specifically highlights grammatical errors without altering sentence structure or meaning. Writefull offers two language model options: its own model, designed for academic writing, and a GPT-based model, which is more suited for general texts. I exclusively used Writefull's academic model to ensure that my writing was polished while retaining my intended meaning. This tool allowed me to manually review each suggested grammatical correction, ensuring that only relevant changes were implemented while preserving the clarity and specificity of my arguments. You can engage with or explore Writefull [here](#).

Use of AI in LaTeX Code Generation

Although I did not use AI for the content of this paper, I did leverage ChatGPT for assistance with LaTeX coding. Writing academic papers in LaTeX can be time-consuming, and while I am proficient in using LaTeX functions and templates, I occasionally sought AI assistance for improving efficiency in technical formatting.

For example, when inserting figures, I used a standard LaTeX template for figure placement:

```

\begin{figure}[H]
\centering
\fbbox{\includegraphics[width=1.0\textwidth]{example.png}}
\caption*{\textbf{Figure X:} \textit{Description of the figure.}}
\label{fig:example}
\end{figure}

```

To expedite the process, I asked ChatGPT to generate concise figure captions based on the provided image descriptions. I then carefully reviewed and edited these AI-generated captions to ensure accuracy and alignment with the scientific context.

Additionally, I frequently use the Vancouver citation style in my references:

```

\bibliographystyle{vancouver}
\begin{thebibliography}{1}
\bibitem{example2024}
Author A, Author B. Title of the paper. Journal Name. \\\
2024;Volume(Issue):Page numbers.
\end{thebibliography}

```

When I had citations formatted in APA style from journal sources or initial drafts, I used ChatGPT to convert them into Vancouver style. Each AI-generated citation was manually checked for correctness against the original references before inclusion in the bibliography.

Moreover, whenever I needed clarification on specific LaTeX commands, such as modifying table formatting, aligning equations, or fine-tuning bibliography settings, I queried ChatGPT for guidance on proper syntax and implementation.

How I Use AI in Academic Writing

Through my experience, I have found that AI serves best as a supplementary tool rather than a substitute for academic writing and critical thinking. While AI tools are useful for improving grammar, generating LaTeX code, and handling citation formatting, they are not a replacement for human judgment, particularly when conveying complex ideas that require depth and precision.

I intentionally avoided using AI for content editing beyond basic grammar checking to ensure that my arguments, terminology, and application of concepts remain true to the academic rigor expected in this field. AI does not possess the contextual depth required to understand my learning outcomes (LOs) or the specific knowledge applications learned in class, and thus, relying on it for substantive edits could dilute the accuracy of my work.

By using AI selectively for efficiency without depending on it for writing or reasoning, I have ensured that this paper reflects my own intellectual contributions while leveraging

technology for auxiliary tasks. This approach aligns with ethical standards in academic writing, ensuring that AI enhances the technical aspects of the writing process without compromising the originality or coherence of the work.